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ABSTRACT

Guidelines are provided for designing and conducting a telephone opinion poll of the community. Issues discussed in the first part of this guide include determining the proper sample size, drawing a representative sample of the general adult population or of voters, selecting phone numbers, making call-backs, obtaining the proper male-female ratio, and restricting calls to certain hours. Part two offers 19 recommendations for designing questions that are most likely to obtain the desired information. The final part consists of 13 instructions for the person conducting the interview including information on the types of people and problems examiners may encounter. This document was selected by the Association of California School Administrators (ACSA) Task Force on Public Confidence as descriptive of a promising practice or exemplary project worthy of highlighting for the California educational community. (DC)

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A PLAN FOR CONDUCTING A LOCAL COMMUNITY EDUCATIONAL OPINION POLL

The following procedure identifies steps to follow when conducting a telephone opinion poll in your community. This guide was developed by a well-known pollster, Dr. Oscar Kaplan, Economic Behavior Analysts, Inc., San Diego, California. The San Diego County Office of Education provided the resources and coordination for the development of this guide which is presented in three parts:

1. Sampling and Sample Size
2. Principles of Item Construction
3. Instructions to Interviewers

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PART I - - SAMPLING AND SAMPLE SIZE

The textbook ideal of a perfect probability sample almost never is attained in practice. Respondent refusals, limitations of funds and time, and other factors usually make it impossible to complete interviews with all who have been identified as members of a probability sample. Nevertheless, long experience indicates that modified probability sampling as described in the following pages usually yields results sufficiently valid and reliable to be employed in decision-making.

SAMPLE SIZE

Many factors must be considered in arriving at sample size. Among these are the amount of risk of error that can be tolerated, need for breakdown of the data into sub-universes, money available for the survey, etc. For a county-wide survey, with results to be released to the public and/or employed in the making of important decisions, the minimum number of interviews that should be completed is listed below. If the survey is being made for internal consumption only, and only to identify general trends, smaller samples may be sufficient and are also listed in the following chart.

RECOMMENDED SAMPLE SIZE

COMMUNITY SIZE	RECOMMENDED SAMPLE SIZE	
	Trends	Decision Making
Under 50,000	100	200 - 250
50,000 to 99,999	100 - 200	300 - 350
100,000 or over	200 - 250	400 - 500

Figure 1 on the following page shows that one of the factors to be considered in determining sample size is the way in which opinion divides. If opinion divides 50:50, a much larger sample is needed than if it divides 10:90. Figure 1 also shows that there are diminishing gains from increasing sample size. For example, in the 50:50 column, to reduce the range of error from plus or minus 5% to plus or minus 3.5%, one must double the sample size from 400 to 800.

DRAWING A SAMPLE OF THE GENERAL ADULT POPULATION

Since most persons 18 years of age or over are eligible to register to vote, for the purposes of the school surveys all persons age 18 or older will be classified as adults. However, voter registration status will not be required for inclusion in the sample of the general population.

All interviewing will be done by telephone. Since most households in most counties now have telephone service, telephone surveys involve all major elements in the population. Listed telephone numbers appear in your local telephone directories. Unlisted numbers are of two types: numbers that will be listed in the next editions of the directories and numbers that are

Figure 1

PROBABLE DEVIATION (PLUS OR MINUS) OF RESULTS DUE TO SIZE OF SAMPLE ONLY (Safety factor of 20 to 1)

Survey Result Is:		1% or 99%	5% or 95%	10% or 90%	15% or 85%	20% or 80%	25% or 75%	30% or 70%	35% or 65%	40% or 60%	45% or 55%	50%
Sample of:	25	4.0	8.7	12.0	14.3	16.0	17.3	18.3	19.1	19.6	19.8	20.0
	50	2.8	6.2	8.5	10.1	11.4	12.3	13.0	13.5	13.9	14.1	14.2
	75	2.3	5.0	6.9	8.2	9.2	10.0	10.5	11.0	11.3	11.4	11.5
	100	2.0	4.4	6.0	7.1	8.0	8.7	9.2	9.5	9.8	9.9	10.0
	150	1.6	3.6	4.9	5.9	6.6	7.1	7.5	7.8	8.0	8.1	8.2
	200	1.4	3.1	4.3	5.1	5.7	6.1	6.5	6.8	7.0	7.0	7.1
	250	1.2	2.7	3.8	4.5	5.0	5.5	5.8	6.0	6.2	6.2	6.3
	300	1.1	2.5	3.5	4.1	4.6	5.0	5.3	5.5	5.7	5.8	5.8
	400	.99	2.2	3.0	3.6	4.0	4.3	4.6	4.8	4.9	5.0	5.0
	500	.89	2.0	2.7	3.2	3.6	3.9	4.1	4.3	4.4	4.5	4.5
	600	.81	1.8	2.5	2.9	3.3	3.6	3.8	3.9	4.0	4.1	4.1
	800	.69	1.5	2.1	2.5	2.8	3.0	3.2	3.3	3.4	3.5	3.5
	1,000	.63	1.4	1.9	2.3	2.6	2.8	2.9	3.1	3.1	3.2	3.2
	2,000	.44	.96	1.3	1.6	1.8	1.9	2.0	2.1	2.2	2.2	2.2
	3,000	.36	.79	1.1	1.3	1.5	1.6	1.7	1.7	1.8	1.8	1.8
	4,000	.31	.69	.95	1.1	1.3	1.4	1.4	1.5	1.5	1.6	1.6
	5,000	.28	.62	.85	1.0	1.1	1.2	1.3	1.4	1.4	1.4	1.4
	10,000	.20	.44	.60	.71	.80	.87	.92	.95	.98	.99	1.0
	50,000	.08	.17	.24	.29	.32	.35	.37	.38	.39	.40	.40

Example: When size of sample is 500 and survey result comes out 25%, you may be reasonably sure (odds 20 to 1) that this result is no more than 3.9 off, plus or minus. Doubling the sample to 1,000 reduces this margin to 2.8

In order to reduce the range of error in half, you must quadruple the size of the sample. Thus, to decrease risk of error the sample size (and cost) increases very rapidly for limited gain.

unlisted by choice of subscribers. A method for reaching these unlisted numbers known as Random Digit Dialing will be decribed later. Since telephone directories now appear in annual cycles, usually the number of unlisted numbers is lowest at the beginning of the cycle.

The white pages bearing residential numbers in your local directory(ies) are the primary source for your telephone poll. The following is an example of how to select random phone numbers from the phone directory(ies) that represent the area being polled.

1. Once your sample size is determined you need to take the phone numbers from the phone directories in the same percentage as they represent - for example, for a sample of 400:

   Example #1: One county area with one phone directory serving that area: 100% of phone numbers will be drawn from that phone book (400 phone numbers).

   Example #2: One county area with two phone directories serving two sub areas: If both directories have the same number of white pages each serving 50% of the total area, then 50% of the phone numbers would be from each phone directory (or 200 phone numbers from each phone directory).

   Example #3: One county area with three phone directories serving three sub areas: If one directory has 1/2 the total numbers, 50% (200) of the phone numbers would be taken from that directory. If the second directory has 1/4 of the total numbers, 25% (100) of the phone numbers would be taken from that directory. The third directory would have the remaining 1/4 of numbers and 25% (100) would be taken from that phone directory.

SELECTION OF PHONE NUMBERS - EXAMPLE SAMPLE SIZE OF 248

The white pages bearing residential numbers in the local phone directory start on page 15 and end on page 1193, for a total of 1178 pages. You must obtain the sample of interviews from this directory and you need to give every page an equal chance of inclusion in the sample insofar as possible. Dividing 1178 (total pages of phone numbers) by 284 (sample size) yields a "skip interval" of about 4.1. You pick a "random start" number from 1 to 4 (by pulling a number out of a hat or by use of a Table of Random Numbers) and then apply the "skip interval." For example, suppose the "random start" number you pull is 3. The pages you will use will be 17, 21, 25, 29, etc. reflecting the "skip interval" of 4.

Similarly, you must obtain 116 interviews and a second county directory whose white pages extend from page 9 to page 448, or 439 pages. The "skip interval" is 3.8. If you apply a "skip interval" of 4, you will run out of pages, but you may go ahead anyway with this "skip interval" and complete your list of sample pages by randomly opening the telephone book to various pages, retaining those pages not previously claimed for the sample.

After pages in the telephone books to be used in the sample have been determined, the column on the page to be used is established by some random procedure. Then a number from 1 to 9 may be drawn randomly to identify the

first residential number to be called. Suppose that column 1 (the first column on the left side of the page) is drawn, and then a number 6 is drawn. Count from the top of column 1 down to the sixth listed residential number. Add a digit to the last number in order to accomplish Random Digit Dialing. For example, if the sixth residential number in column 1 is 467-8765 change it to 467-8766. If this is an inoperative number or needs to be replaced for some other reason, go to the seventh residential number in column 1, repeating the procedure previously used. If you run out of residential numbers in column 1 you may use any of the other columns on the page, but following the same procedure as in column 1.

DRAWING A SAMPLE OF THE VOTER POPULATION

The local Registrar of Voters maintains a complete listing of all registered voters in each county. There are many different ways in which random samples of registered voters may be drawn. Ideally, one should pick every nth name to reach the desired sample size, employing the "random start" and "skip interval" procedures. A simpler, though somewhat less exact method, would be to randomly select precints and then randomly select within the precinct lists. For example, suppose that there are 3,211 precincts in your county and you wish to interview 400 voters. You could randomly select 100 precincts and complete 4 interviews in each precinct. The "skip interval" would be 32 and the "random start" would be a number from 1 to 11 randomly selected.

CALL-BACKS

Full implementation of probability sampling requires call-backs when respondents cannot be reached on the initial call. Call-backs are costly and delay the completion of a survey. If call-backs are included in the design, it is recommended that no more than three attempts be made to reach a number included in the sample. After three callbacks call the next number in the sequence.

MALE/FEMALE RESPONDENTS

An effort should be made to obtain at least 40% of the interviews with adult males.

HOURS OF POLLING

Telephoning should be restricted to the hours of 5:00 to 9:00 p.m. Monday through Friday, 9:00 a.m. to 9:00 p.m. on Saturdays, and 10:00 a.m. to 9:00 p.m. on Sundays. Deviation from these hours may lead to an underinclusion of employed persons.

PART II - - PRINCIPLES OF ITEM CONSTRUCTION

1. Use simple words whenever they are adequate.

2. Whenever possible use simple sentences. Keep questions as brief as possible. Many respondents are aged and have memory problems. If the question is put in the form of a long paragraph, the respondent may have forgotten the first sentences in the paragraph after hearing the last one.

3. Defend the ego of your respondent insofar as you can. For example, a long list of factual questions which the respondent is unable to answer may alienate the respondent. If such questions must be asked, it is best that they not be bunched. A lead in, such as "Do you happen to know...?" may make it easier for a respondent to acknowledge ignorance.

4. Generally speaking, it is good practice to avoid emotionally-loaded words, such as fascist, communist, Un-American, leftist, rightest, etc.

5. If possible, the first question in the sequence should be easy to answer, non-threatening, and consistent with the topic of the survey as stated in the introduction. IT IS VERY IMPORTANT THAT THE RESPONDENT ANSWER THE FIRST QUESTION. It may be worthwhile to use a first question that is not of major interest to the sponsor in order to involve the respondent in the survey. Provide an introduction that leads directly into the first question. Example: "Hello! My name is _____. I'm calling for _____. We'd like to know how people feel about the public schools. For example: Students are often give the grades A, B, C, D...."

6. A cooperative respondent must be able to answer the question. For example, if a person drinks cola drinks sporadically but in quantity and is asked to tell how many cans/bottles were consumed during the last twelve months, it would be impossible for him to give an accurate answer.

7. Use words and phrases as precisely as possible. "Thirty days" is better than "one month," "twelve months" is better than "one year."

8. Demographic questions are usually placed at the end of the questionnnaire.

9. Generally, it is best to locate an income question, if one is used, at the very end of the interview.

10. Avoid words and phrases which mean different things to different respondents. For example, the respondent may be asked to choose between "old-fashioned" women and "present-day" women. What is "old-fashioned?" What is "present-day?"

11. Do not use compound questions unless you are prepared to follow up on them. For example, the question might be: "Did you eat ice cream or candy yesterday?" If the answer is "yes" it still is unclear whether one or the other, or both, were consumed. It would be better to ask two questions: "Did you eat ice cream yesterday?" "Did you eat candy yesterday?"

12. In item construction, the choice often is between dealing with broad or specific attitudes. For example, one could ask: "In general, do you favor or oppose high protective tariffs?" "Do you favor or oppose a tariff of $300 per car on automobiles manufactured outside the United States?" The latter question obviously yields much more specific and less ambiguous information than the former one.

13. "Straight-jacket" questions should be avoided when possible. A "straight-jacket" question does not include all major alternatives open to the respondent. For example, with regard to Central America, the respondent might be offered four alternatives: (a) full-scale involvement of U.S. troops in El Salvador; (b) removal of all U.S. uniformed personnel from El Salvador; (c) air support only for El Salvador government troops; (d) economic aid only for the government of El Salvador. Obviously, there are numerous combinations and permutations of these alternatives which are possible, as well as many other alternatives. Even when respondents are permitted to express their views under an "other answers" category, few will do so.

14. The sequence of questions is important. For example, the sequence of the following questions probably would markedly influence the results: "Do you favor or oppose elimination of TV commercials?" "Would you be willing to pay $100 a year for each TV set in your home in order to eliminate TV commercials?"

15. Although experienced interviewers may be able to hold respondents on the telephone for more than half an hour, it is best to keep interviews to 15-20 minutes in length if possible. If shorter interviews provide the needed information, so much the better.

16. Insofar as possible, instructions to interviewers dealing with specific questions should appear on the questionnaire. When an interview is in progress there is no time to look up instructions.

17. Questionnaires should be pre-tested before being finalized and printed. Even five or ten interviews often will reveal marked deficiencies or items that need revision. Remember to pretest the revision.

18. Questionnaires should be easy for the interviewer to complete. A telephone interview is stressful and recording of information must be done quickly and accurately. Checking and underlining procedures facilitate the work of interviewers.

19. Decide at the beginning of the questionnaire construction process on the information that you need to achieve your objectives. Work out in advance how you will manipulate the data after it is collected. Ask yourself before you finalize the questionnaire: Is this item really necessary? Is it worth the time and money that it will cost? Much marginal, and sometimes even useless, information is collected in surveys.

PART III - - INSTRUCTIONS TO INTERVIEWERS

1. Before starting the survey familiarize yourself with the sampling procedures and with the questionnaire. Try the questionnaire out on several people not in the sample before starting your assignment in the survey.

2. A sample introduction appears at the top of the questionnaire. You may want to put it in your own words, but do not differ from it in any substantial way. BE FRIENDLY, COURTEOUS, CONFIDENT. If you are unsure of yourself, the respondent will pick it up. Go from the introduction immediately to the first question. If the respondent answers the first question the probability is high that the respondent will complete the questionnaire. Do not apologize for making the interview, or for taking the respondent's time; the survey serves an important public purpose. Do not ask if the respondent wishes to participate in the survey - the answer frequently is "no." Do not lie to a respondent about the length of time required to complete the interview, but it is fair to say that the length of time varies as a range, e.g., 7-12 minutes. Do not discuss the length of the interview, purpose, etc. unless you are asked.

3. If the issue comes up, or if you are questioned by the respondent, you may state that the respondent's anonymity will be fully protected and that answers will be used for statistical purposes only. You may encounter persons you know or of whom you have heard. It is unethical and unprofessional to discuss the answers of respondents, or details of the survey project, with persons who are not involved in it.

4. No matter what may be said to you, respond courteously. No one is obligated to participate in the interview. Do your best to win participation of the respondent in the survey; terminate the interview if you become convinced this cannot be accomplished. Even if you are refused, terminate the interview in a friendly way, saying "thank you anyway." If you catch the respondent at a bad time, and this is the basis for the refusal, you may ask to call back at a more favorable time set by the respondent.

5. Read the question EXACTLY as they appear on the survey form. Do not deviate from the survey instructions unless authorized to do so by your supervisor. Based on your experience, it is possible that you may be able to improve the wording of the questions and/or the instructions. Nevertheless, it is critical that you conform to the wording of the questions and instructions. If each interviewer independently rewords questions and changes instructions the results would be of unknown validity. If you find problems in the questionnaire and/or instructions, inform your supervisor who will decide on the action to take.

6. You will be dealing with random samples of the general population and you may encounter psychotics, drunks, seniles, etc. If it is clear that the respondent is unable to engage in the interview in a meaningful way, ask to speak to someone else in the household if permitted by the sampling plan, or terminate the interview.

7. You are not permitted to take sides or offer facts or opinions unless indicated on the questionnaire. Your job is to impartially record the respondent's views. In no way are you to indicate approval or disapproval of a respondent's views. No matter how offensive to you a respondent's opinions may be, you are not to show this by voice or words. Your job is to be neutral but friendly. If the respondent seeks information, on the authorization of your supervisor, you may provide it or tell the respondent where it may be obtained. Respondents are sensitive and may, even over the telephone, gauge the interviewer's position unless a special effort is made to mask it. There is truth in the statement that "we chatter with our finger tips."

8. A major problem in interviewing is in dealing with respondents who give long-winded answers. Most of the questions that you will be asking are "structured" and can be answered very briefly, sometimes by "yes" or "no," or with a few words. In such questions, we are not interested in why the respondent has taken a particular stand. Sometimes it is obvious that the respondent has not understood a question. If this is the case, you may repeat the question as tactfully as possible. Respondents often give the requested answer and then ramble on, sometimes irrelevantly. The problem of extended answers is particularly acute with "open end" questions in which the number of answers is not limited; such questions often are of the "why" type. The task of the interviewer is to move the respondent to the next question in the sequence immediately after the desired information has been obtained. this must be done without offending or alienating the respondent. Sometimes it is necessary to let a respondent ramble a little in order to maintain rapport. One technique for advancing to the next question is to say: "That's interesting. Now what do you think of this next question?"

9. Open-end questions are very valuable if properly completed. Many pollsters say that the way to identify good interviewers is by studying the way they handle open-end questions. The respondent must be fully probed. "Why do you favor merit pay for teachers?" "Are there any other reasons why you favor merit pay?" "Can you think of any other reasons for using a merit pay system?" Do not accept uninformative answers, such as, "It will improve our schools." Ask: "How will it improve our schools?" Faithfully record the respondent's answers as fully as possible, using the questionnaire margins or back of page, if necessary. In some cases, you may want to make brief notes and then write a paragraph or two after the interview is completed. Remember that the person doing the coding of the free-answer questions must depend entirely on what you have written. In some questionnaires, major response categories are anticipated and provided for in open questions. For example, if the question is, "What is the most important problem in American public education?" one could anticipate that some would say "inadequate funding." This answer could be listed and given a number along with listings and numbers for other anticipated answers. Space would be provided to write in answers that were not anticipated. In a free-answer question with anticipated answer categories, it is stated emphatically on the questionnaire: DO NOT READ THE ALTERNATIVES. In order to do a good job with a question of this kind, you should know the kinds of answers that qualify for the various categories and the kinds of answers that must be reported in the blank spaces provided for other replies.

10. Sometimes unusual and significant things happen in the course of an interview and they should be reported to your supervisor. For example, a respondent may insist on knowing the name of the person who is directing the survey, or why the survey is being done, or who is paying for it. If the matter appears urgent, take it up at once with your supervisor. Or, if it does not appear urgent, promise that a call will be made at a later time, recording this pledge on the questinnaire and in a special note. The switchboard at County Schools, _____, has been notified that the survey is in progress and can authenticate its sponsorship.

11. As one nears the end of the interview, and/or if the respondent's patience seems to be strained, indicate that the interview is nearly over and that it will be completed in a few minutes.

12. After asking the last question, quickly check the questionnaire to see if you have left out any questions. Make an even more thorough check after you hang up. If you have omitted a question, call back immediately.

13. Thank the respondent warmly at the end of the interview.